Application No. 10/759,955   Customer No. 01933
Response to Office Action

<u>**Listing of Claims**</u>:

1. (Currently Amended) A plasma generator, ~~in which~~

<u>comprising:</u>

a plasma forming space [[,]] into which ~~the~~ air is

introduced<u>:</u> ~~, is provided,~~

5   <u>a dielectric provided in the plasma forming space; and</u>

band plate-like first and second electrodes ~~are~~ arranged in

opposed relation to each other ~~through a~~ <u>on respective surfaces</u>

<u>of the</u> dielectric in the plasma forming space<u>,</u> ~~and~~

<u>wherein</u> plasma is generated by discharge caused by applying

10   voltage between the first and second electrodes, ~~wherein~~ <u>and</u> the

first and second electrodes are provided on ~~one surface and~~

~~another surface~~ <u>the respective surfaces</u> of the dielectric

~~, respectively, and arranged in a state~~ <u>so as to be</u> relatively

displaced in a surface direction of the dielectric so as to

15   satisfy ~~the following~~ equation 1<u>, equation 2 and</u> ~~to~~ equation 3:

(Equation 1) .

$$\tan\theta_2 = \frac{L1}{d}$$

(Equation 2)

$$\tan\theta_1 = \frac{1}{\varepsilon_2} \tan\theta_2$$

(Equation 3)

$$26 \times 10^6 [V/m] \geq \frac{\cos\theta_1 \cdot \sin2\theta_2}{d\sin2\theta_1} V = E_1 (max)$$

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~~wherein~~ where:

20   L1 is a ~~separate~~ separation distance in the surface direction of the dielctric between a front end edge ~~position~~ of the first electrode and a corresponding end edge ~~position~~ of the second electrode, which is located on an outside in a displacement direction of the electrodes from the front end edge

25   position of the first electrode and which is closest to the front end edge position of the first electrode, ~~in the surface direction of the dielectric,~~

θ_2 is an angle formed by an imaginary plane including the front end edge of the first electrode and the end edge of the

30   second electrode ~~with a thickness-wise direction~~ across a thickness of the dielectric,

d is a thickness [m] of the dielectric,

V is ~~the~~ an intensity [V] of the voltage applied between the first and second electrodes,

35   θ_1 is an outgoing angle of an electric field in the plasma forming space at a boundary surface of the dielectric,

e_2 is a dielectric constant of the dielectric, and

$E_1(max)$ is a maximum value [V/m] of the electric field at the end surface of the electrode.

2. (Currently Amended) The plasma generator according to claim 1, wherein the corresponding end edge of the second

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~~electrade~~ electrode is ~~formed by~~ a rear end edge of the second
electrode.

3.   (Currently Amended) The plasma generator according to
claim 1, wherein the corresponding end edge of the second
~~electrade~~ electrode is ~~formed by~~ a front end edge of the second
electrode.

4.   (Currently Amended) The plasma generator according to
claim 1, wherein the angle θ_2 ~~formed by the imaginary plane with
the thickness-wise direction of the dielectric~~ is at least 45°.

5.   (Currently Amended) The plasma generator according to
claim 1, wherein a ratio (L1/d) of the ~~separate~~ separation
distance L1 to the thickness d of the dielectric is 1 to 3.

6.   (Currently Amended) The plasma generator according to
claim 4, wherein a ratio (L1/d) of the ~~separate~~ separation
distance L1 to the thickness d of the dielectric is 1 to 3.

7.   (Original) The plasma generator according to claim 1,
wherein the voltage applied between the first and second
electrodes is 2.5 to 3.5 kV.

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8. (Original) The plasma generator according to claim 4, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 kV.

9. (Original) The plasma generator according to claim 5, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 kV.

10. (Original) The plasma generator according to claim 6, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 kV.

Claims 11-13 (Canceled).

14. (Currently Amended) The plasma generator according to claim 2, wherein the angle θ_2 ~~formed by the imaginary plane with the thickness-wise direction of the dielectric~~ is at least 45°.

15. (Currently Amended) The plasma generator according to claim 3, wherein the θ_2 ~~formed by the imaginary plane with the thickness-wise direction of the dielectric~~ is at least 45°.

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16. (Currently Amended) The plasma generator according to claim 2, wherein a ratio (L1/d) of the ~~separate~~ <u>separation</u> distance L1 to the thickness d of the dielectric is 1 to 3.

17. (Currently Amended) The plasma generator according to claim 3, wherein a ratio (L1/d) of the ~~separate~~ <u>separation</u> distance L1 to the thickness d of the dielectric is 1 to 3.

18. (Original) The plasma generator according to claim 2, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 kV.

19. (Original) The plasma generator according to claim 3, wherein the voltage applied between the first and second electrodes is 2.5 to 3.5 kV.

Claim 20 (Canceled).